ABSTRACT

Recently noticebly more and more popularity of wireless LAN promote diferent kind transmision of multimedia aplication, streamming video is being one of the most important applications. Video streamming service, user does not have to wait downloaded file processing but at the same time user can download and play. In video streaming, frames are sent one by one from server, and then client will receive and display the frames. Frames can not arrive too long or too slow. And then, the changing condition in network IEEE 802.11e EDCA can effect to video streaming quality which is sent by server.

In this final project investigates the video quality attained in streaming H.264 video over IEEE 802.11e EDCA networks using an integrated tool environment called EvalVid, which comprises an H.264/AVC encoder/decoder, a network simulator and video quality evaluation tools. The benefit of such an integrated tool environment is that it allows the evaluation of real video sources compressed using an H.264 encoder. This final project will analyze video streaming quality content that received by user/client using parameters like throughput, delay, loss packet, jitter and PSNR. Then, Mean Opinion Score is used for subjective calculation.

From result of simulation shows that effect of EDCA implementation visible when traffic close or more than maximum capacity of network. EDCA with implementing the higger priority for video H.264 can increase throughput 39% faster than without EDCA, packet loss under 3%, delay under 0.027 second, and jitter 0.04 second. Video quality evaluation reach Y-PSNR more than 25 dB and MOS almost reach 5 point. In the end, implementing EDCA for video streamming H.264 can result QoS parameter value suitable with recomendation ITU-T and some references.

Keywords: H.264/AVC, IEEE 802.11e, wirelessLAN, EDCA, video streamming, QoS.